REMARKS

Claims 21-25 were objected to with informalities noted by the examiner. Claims 21 and 25 have been amended to address the informalities. Claim 1 has also been amended to delete an extraneous comma and correct an informality noticed by applicant.

Regarding claims 21 and 25, the claims have been amended to make clear that the microdischarge cavities of claim 21 and the microdischarge cavity of claim 25 are disposed in the dielectric substrate. The suggestion regarding changing microdischarges to microdischarge cavities in claim 21 has been adopted. That same suggestion was made with respect to claim 25. However, claim 25 does not include the phrase identified as being unclear in the office action. Specifically, "said plurality of microdischarges being physically isolated"does not appear in claim 25. No correction is believed to be required.

Claims 1-4, 6, 10, 11 and 16-18 stand rejected under § 102 as being anticipated by Mendelsohn, U.S. Patent 4,843,281. The rejection is respectfully traversed.

Contrary to the statements in the office action, Mendelsohn includes no microdischarge cavities in a substrate. Mendelsohn is directed to a gas plasma panel. Two substrates 72 and 74 are held apart by a spacer to define a closed envelope for chamber 86 that is hermetically sealed by a dielectric sealant 75. Column 4, lines 15-20.

An artisan would recognize that a spacer in a plasma display panel like that of Mendelsohn is not a substrate. The spacers hold apart the substrates 72 and 74. There is no additional substrate in Mendelsohn's plasma display panel. A contrary interpretation that is unsupported by Mendelsohn is made by the rejection. The Examiner's definition of

Mendelsohn's spacer introduces another substrate when the Specification mentions nowhere any substrates other than the glass plates 72 and 74.

Also, there are no microcavities in Mendelsohn or in typical plasma display panels. Like in typical plasma panels, plasmas (discharges) produced between column electrodes 76, 78 and row electrode 82 are not isolated in individual cavities.

The examiner alleges that "spacers between substrates 72 and 74 consist of a substrate with holes in it." There is absolutely no basis for this assertion in the Mendelsohn patent. It is the envelope or chamber 86 that contains a discharge medium in Mendelsohn. This is clearly described in column 4 beginning at line 25.

Also, contrary to the representation on page 3 of the office action, column 4, lines 19 and 20 clearly describe the area between the substrate 72 and 74 as a "envelope or chamber 86", not a plurality of microdischarge cavities. This single chamber is sealed around the outside edge and evacuated and then filled with ionizable gases disclosed in column 4, lines 25-27. There are no microdischarge discharge cavities and no microdischarge operations disclosed in Mendelsohn whatsoever.

While this is a sufficient basis for the traversal of this rejection as well as other rejections that are asserted in the office action, applicant also notes that the examiner's interpretation of coherence length in the office action is also incorrect. The examiner apparently interprets the coherence length as meaning cavities that are arranged in rows and columns. Arrangement in rows and columns does not mean that microcavities are arranged in a coherence length of an emission line. Cavities in rows and columns in no way guarantee that the generated plasmas lie within the coherence length.

Doing so must be intentional and requires knowledge of the coherence length for a specific atomic emission line. The examiner is referred to the paragraph of the specification beginning at page 8, line 26 for an explanation of the coherence length spacing.

Also, coherence is undesirable in a plasma display panel. Coherence in the light produced would produce speckling that is readily visible to any observer and would dramatically detract from the quality of the display.

The § 103 rejection of claims 5, 7, 8 and 20 is defective for the reasons discussed above. The separate rejection of claims 9, 21, 22, 24 and 25 under § 103 over Mendelsohn in view of Horiuchi suffers from the same defects discussed above with respect to claim 1. The examiner uses the same incorrect interpretations of the envelope 86 and the spacer between the substrate 72 and 74, as is used in the rejection of claim 1.

As an additional basis for traversal, however, it is incorrect to conclude that it would have been obvious to modify Mendelsohn. The office action states "...it would have been obvious to one having ordinary skill in the art at the time the invention was made to have arrange [sic] the plurality of microdischarge cavities of Mendelsohn in approximately a Fresnel pattern." This logic is fundamentally flawed. It is well known that the spacing between electrodes 76 and 78 (which determines the spatial resolution of the display) cannot be made small (typical spacing is several hundred μm). Therefore, it is not possible to make a Fresnel structure of any reasonable size for visible wavelengths with the Mendelsohn plasma display panel because the Fresnel pattern requires multiple rings in which the ring-to-ring spacing steadily decreases as one moves away from the

center of the Fresnel structure. Thus, the required spacing between rings is simply too small to allow the well-known PDP structure of Figs. 1, 2, and 5 of Mendelsohn to make a Fresnel structure of any significant quality. The required modifications are contrary to the basic structure of a plasma display panel, and also contrary to its purpose, which would not benefit from coherence as discussed above.

The separate rejection of claims 12, 13 and 19 under § 103 in view of Mendelsohn and Stine also includes the incorrect interpretation of the spacer and the interpretation of Mendelsohn as disclosing a spacer having holes in it, and the incorrect interpretation of the envelope 86 as being a plurality of microdischarge cavities. The identical defects are present in the rejection of claim 15 and the rejection of claim 23.

While there are many additional defects in the rejections and their combinations, the incorrect interpretation of Mendelsohn is a sufficient basis for the traversal of all of the rejections. The separate patentability of all of the claims is maintained. The rejections should be withdrawn and all of the claims should be allowed.

For all of the above reasons, applicants request reconsideration and allowance of the application. If the examiner believes that an interview would expedite prosecution, the examiner is invited to contact the undersigned attorney at the below-listed number.

Respectfully submitted,

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